

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: P. Quigley, et al. )  
Serial No.: NYA ) Group Art Unit: 3617  
Filed: October 2, 2003 ) Examiner: Avila, Stephen P.  
For: *Buoyancy Control Systems for Tubes* ) Attorney Docket No.: FPY-083.02  
)

Mail Stop: Patent Application  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT  
UNDER 37 C.F.R. §§ 1.56 and 1.97**

Sir:

Submitted herewith on Form PTO-1449 is a listing of documents known to Applicants and/or their Attorney in compliance with the requirements of 37 C.F.R. § 1.56. Applicants respectfully request that the Examiner consider the listed documents and indicate they were considered by making appropriate notations on the attached Form PTO-1449.

Copies of the references are not provided as they were previously cited by or submitted to the office in prior patent application serial no. 10/134,660, filed April 29, 2002, and relied upon for an earlier filing date under 35 U.S.C. §120.

In compliance with the requirements of 37 C.F.R. §§ 1.56 and 1.97, Applicants have cited for the Examiner's consideration a co-pending U.S. patent application that is owned at least in part by the assignee of this application and that describes subject matter related to the present application. The co-pending application is listed herewith in accordance with M.P.E.P. 609 III.D which states: "Applicants may wish to list U.S. patent application numbers on other than Form PTO-1449 or PTO/SB/08A format to avoid the application numbers of pending applications being published on the patent. If a citation is not printed on the patent but has been considered

by the Examiner in accordance with this section, the patented file will reflect that fact as noted in subsection III.C(2) above."

No copy of the co-pending application has been provided. If the Examiner wishes to have a copy of the co-pending application, the Examiner should contact the Attorney of record.

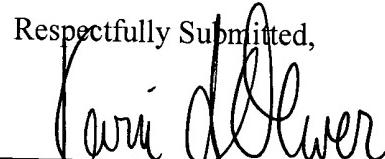
Our Docket #	Serial #	Date Filed	Title
FPY-083.01	10/134,660	April 29, 2002	<i>Buoyancy Control Systems for Tubes</i>

This submission does not represent that a search has been made or that no better art exists. Nor does it constitute an admission that the cited documents are material or constitute "prior art." If the Examiner applies the listed documents as prior art against any claim in the application and Applicant determines that the cited documents do not constitute prior art under United States law, Applicant reserves the right to present to the Office the relevant facts and law regarding the appropriate status of such documents. Applicant further reserves the right to take appropriate action to establish the patentability of the claimed subject matter over the listed documents, should one or more of the referenced documents be applied against the claims of the present application.

No fee is believed due. If a fee is occasioned or if extensions of time are necessary, please charge any fee deficiency or credit any overpayment to Deposit Account, No. **06-1448**, Ref. **FPY-083.02**.

Date: October 2, 2003  
**Customer No: 25181**  
Patent Group  
Foley Hoag LLP  
155 Seaport Blvd.  
Boston, MA 02110  
Tel. (617) 832-1000  
Fax (617) 832-7000

Respectfully Submitted,

  
\_\_\_\_\_  
Kevin A. Oliver  
Reg. No. 42,649

Form PTO-1449

**INFORMATION DISCLOSURE CITATION  
IN AN APPLICATION**  
*(Use several sheets if necessary)*
Docket Number (Optional)  
FPY- 083.02 (22823-8302)Application Number  
To be AssignedApplicants  
Quigley, et al.Filing Date  
October 2, 2003Group Art Unit  
3617**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL	DOCUMENT NUMBER		DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	A1	646,887	04/1900	Stowe et al.			
	A2	1,930,285	10/1933	Robinson	113	116	
	A3	2,648,720	08/1953	Alexander	174	34	
	A4	2,690,769	10/1954	Brown	138	55	
	A5	2,725,713	12/1955	Blanchard	57	149	
	A6	2,810,424	10/1957	Swartswelter et al.	154	1.8	
	A7	3,086,369	04/1963	Brown	61	72.3	
	A8	3,116,760	01/1964	Matthews	138	125	
	A9	3,277,231	10/1966	Downey et al.	174	47	
	A10	3,334,663	08/1967	Peterson	138	132	
	A11	3,379,220	04/1968	Kiuchi et al.	138	125	
	A12	3,477,474	11/1969	Mesler	138	133	
	A13	3,507,412	04/1970	Carter	214	338	
	A14	3,522,413	08/1970	Chrow	219	301	
	A15	3,554,284	01/1971	Nystrom	166	250	
	A16	3,579,402	05/1971	Goldsworthay et al.	156	392	
	A17	3,604,461	09/1971	Matthews	138	137	
	A18	3,606,402	09/1971	Medney	285	305	
	A19	3,692,601	09/1972	Goldsworthay et al.	156	74	
	A20	3,700,519	10/1972	Carter	156	156	
	A21	3,701,489	10/1972	Goldsworthay et al.	242	7.21	
	A22	3,734,421	05/1973	Karlson et al.	242	7.21	
	A23	3,738,637	06/1973	Goldsworthay et al.	269	61	
	A24	3,740,285	06/1973	Goldsworthay et al.	159	173	
	A25	3,769,127	10/1973	Goldsworthay et al.	156	172	
	A26	3,773,090	11/1973	Ghersa et al.	138	141	

**INFORMATION DISCLOSURE CITATION  
IN AN APPLICATION**  
*(Use several sheets if necessary)*
Docket Number (Optional)  
FPY- 083.02 (22823-8302)Application Number  
To be AssignedApplicants  
Quigley, et al.Filing Date  
October 2, 2003Group Art Unit  
3617

	A27	3,783,060	01/1974	Goldsworthy et al.	156	69	
	A28	3,860,742	01/1975	Medney	174	84S	
	A29	3,828,112	08/1974	Johansen et al.	174	47	
	A30	3,856,052	12/1974	Feucht	138	119	
	A31	3,933,180	01/1976	Carter	138	89	
	A32	3,956,051	05/1976	Carter	156	429	
	A33	3,957,410	05/1976	Goldsworthy et al.	425	183	
	A34	3,960,629	06/1976	Goldsworthy	156	180	
	A35	Re 29,112	01/1977	Carter	156	156	
	A36	4,053,343	10/1977	Carter	156	172	
	A37	4,057,610	11/1977	Goettler et al.	264	108	
	A38	4,095,865	06/1978	Denison et al.	339	16R	
	A39	4,108,701	08/1978	Stanley	156	160	
	A40	4,125,423	11/1978	Goldsworthy	156	428	
	A41	4,133,972	01/1979	Andersson et al.	174	47	
	A42	4,137,949	02/1979	Linko, III et al.	138	125	
	A43	4,139,025	02/1979	Carlstrom	138	153	
	A44	4,190,088	02/1980	Lalikos et al.	138	126	
	A45	4,200,126	04/1980	Fish	138	143	
	A46	4,220,381	09/1980	van der Graaf	339	16C	
	A47	4,241,763	12/1980	Antal et al.	138	127	
	A48	4,248,062	02/1981	McLain et al.	64	1	
	A49	4,261,390	04/1981	Belofsky	138	125	
	A50	4,303,457	12/1981	Johansen et al.	156	149	
	A51	4,308,999	01/1982	Carter	242	7.02	
	A52	4,336,415	06/1982	Walling	174	47	
	A53	4,446,892	05/1984	Maxwell	138	104	
	A54	4,463,779	08/1984	Wing et al.	138	125	

INFORMATION DISCLOSURE CITATION IN AN APPLICATION <i>(Use several sheets if necessary)</i>			Docket Number (Optional) FPY- 083.02 (22823-8302)		Application Number To be Assigned		
			Applicants Quigley, et al.				
			Filing Date October 2, 2003			Group Art Unit 3617	
	A55	4,515,737	05/1985	Karino et al.	264	22	
	A56	4,522,235	06/1985	Kluss et al.	138	130	
	A57	4,530,379	07/1985	Policelli	138	109	
	A58	4,556,340	12/1985	Morton	405	195	
	A59	4,578,675	05/1986	MacLeod	340	855	
	A60	4,606,378	08/1986	Meyer	138	103	
	A61	4,627,472	12/1986	Goettler et al.	138	174	
	A62	4,657,795	04/1987	Foret	428	36	
	A63	4,681,169	07/1987	Brookbank, III	166	385	
	A64	4,728,224	03/1988	Salama et al.	405	195	
	A65	4,789,007	12/1988	Cretel	138	174	
	A66	4,849,668	07/1989	Crawley et al.	310	328	
	A67	4,859,024	08/1989	Rahman	350	96.23	
	A68	4,992,787	02/1991	Helm	340	854	
	A69	5,097,870	03/1992	Williams	138	115	
	A70	5,170,011	12/1992	Martucci	174	47	
	A71	5,172,765	12/1992	Sas-Jaworsky et al.	166	384	
	A72	5,176,180	01/1993	Williams et al.	138	172	
	A73	5,182,779	01/1993	D'Agostino et al.	385	13	
	A74	5,184,682	02/1993	Delacour et al.	166	385	
	A75	5,188,872	02/1993	Quigley	428	36.2	
	A76	5,209,136	05/1993	Williams	74	502.5	
	A77	5,222,769	06/1993	Kaempen	285	45	
	A78	5,285,008	02/1994	Sas-Jaworsky et al.	174	47	
	A79	5,285,204	02/1994	Sas-Jaworsky	340	854.9	
	A80	5,330,807	07/1994	Williams	428	34.5	
	A81	5,334,801	08/1994	Mohn	174	47	
	A82	5,348,096	09/1994	Williams	166	384	

**INFORMATION DISCLOSURE CITATION  
IN AN APPLICATION**  
*(Use several sheets if necessary)*
Docket Number (Optional)  
FPY- 083.02 (22823-8302)Application Number  
To be AssignedApplicants  
Quigley, et al.Filing Date  
October 2, 2003Group Art Unit  
3617

	A83	5,351,752	10/1994	Wood et al.	166	68	
	A84	5,348,096	09/1994	Williams	166	384	
	A85	5,394,488	02/1995	Fernald et al.	385	13	
	A86	5,426,297	06/1995	Dunphy et al.	250	227.23	
	A87	5,428,706	06/1995	Lequeux	392	472	
	A88	5,435,867	07/1995	Wolfe et al.	156	171	
	A89	5,443,099	08/1995	Chaussepied et al.	138	109	
	A90	5,469,916	11/1995	Sas-Jaworsky et al.	166	64	
	A91	Re 35,081	11/1995	Quigley	428	36.2	
	A92	5,499,661	03/1996	Odru et al.	138	124	
	A93	5,551,484	09/1996	Charboneau	138	104	
	A94	5,641,956	06/1997	Vengsarkar et al.	250	227.14	
	A95	5,730,188	03/1998	Kalman et al.	138	135	
	A96	5,755,266	05/1998	Aanonsen et al.	138	174	
	A97	5,797,702	08/1998	Drost et al.	405	166	
	A98	5,828,003	10/1998	Thomeer et al.	174	69	
	A99	5,908,049	06/1999	Williams et al.	138	125	
	A100	5,913,337	06/1999	Williams et al.	138	125	
	A101	5,921,285	07/1999	Quigley et al.	138	125	
	A102	5,933,945	08/1999	Thomeer et al.	29	825	
	A103	5,951,812	09/1999	Gilchrist, Jr.	156	304.2	
	A104	5,984,581	11/1999	McGill et al.	405	172	
	A105	6,016,845	1/2000	Quigley et al.	138	125	
	A106	6,148,866	11/2000	Quigley et al.	138	125	
	A107	6,286,558 B1	09/2001	Quigley et al.	138	125	
	A108	6,357,485 B2	03/2002	Quigley et al.	138	125	
	A109	6,361,299 B1	03/2002	Quigley et al.	425	35.9	

### FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						YES	NO
	B1	0024512 A1	03/1981	European			
	B2	0352148 A1	01/1990	European			
	B3	0505815 A2	09/1992	European			
	B4	4214383 C1	09/1993	Germany			
	B5	553110	08/1942	United Kingdom			
	B6	2255994 A	11/1992	United Kingdom			
	B7	2270099 A	03/1994	United Kingdom			
	B8	87/04768	08/1987	WO			

### OTHER DOCUMENTS

*(Including Author, Title, Date, Pertinent Pages Etc.)*

	C1	International Search Report Completed on August 13, 2002.
	C2	Austigard E. and R. Tomter, "Composites Subsea: Cost Effective Products; an Industry Challenge," Subsea 94 International Conference, the 1994 Report on Subsea Engineering : The Continuing Challenges
	C3	Connell Mike et al., "Coiled Tubing: Application for Today's Challenges," Petroleum Engineer International, pp 18-21 (July 1999)
	C4	Feechan Mike et al., "Spoolable Composites Show Promise," The American Oil & Gas Reporter, pp. 44-50 ( September 1999)
	C5	Fowler Hampton, "Advanced Composite Tubing Usable," The American Oil & Gas Reporter, pp. 76-81 (September 1997)
	C6	Fowler Hampton et al., "Development Update and Applications of an Advanced Composite Spoolable Tubing," Offshore Technology Conference held in Houston Texas from 4 <sup>th</sup> to 7 <sup>th</sup> of May 1998, pp. 157-162
	C7	Hahn H. Thomas and Williams G. Jerry, "Compression Failure Mechanisms in Unidirectional Composites," NASA Technical Memorandum pp. 1-42 ( August 1984 )
	C8	Hansen et al., "Qualification and Verification of Spoolable High Pressure Composite Service Lines for the Asgard Field Development Project," paper presented at the 1997 Offshore Technology Conference held in Houston Texas from 5 <sup>th</sup> to 8 <sup>th</sup> of May 1997, pp. 45-54
	C9	Haug et al., "Dynamic Umbilical with Composite Tube (DUCT)," Paper presented at the 1998 Offshore Technology Conference held in Houston Texas from 4 <sup>th</sup> to 7 <sup>th</sup> , 1998, pp. 699-712
	C10	Lundberg et al., "Spin-off Technologies from Development of Continuous Composite Tubing Manufacturing Process," Paper presented at the 1998 Offshore Technology Conference held in Houston, Texas from 4 <sup>th</sup> to 7 <sup>th</sup> of May 1998, pp. 149-155
	C11	Marker et al., "Anaconda: Joint Development Project Leads to Digitally Controlled Composite Coiled Tubing Drilling System ,," Paper presented at the SPEI/ COTA, Coiled Tubing Roundtable held in Houston, Texas from 5 <sup>th</sup> to 6 <sup>th</sup> of April, 2000, pp. 1-9
	C12	Measures R. M., "Smart Structures with Nerves of Glass," Prog. Aerospace Sci. 26(4): 289-351 (1989)

	C13	Measures et al., "Fiber Optic Sensors for Smart Structures," Optics and Lasers Engineering 16: 127-152 (1992)
	C14	Poper Peter, "Braiding," International Encyclopedia of Composites, Published by VGH, Publishers, Inc. , New York, NY 10010
	C15	Quigley et al., "Development and Application of a Novel Coiled Tubing String for Concentric Workover Services," Paper presented at the 1997 Offshore Technology Conference held in Houston, Texas from 5 <sup>th</sup> to 8 <sup>th</sup> of May 1997, pp. 189-202
	C16	Sas-Jaworsky II and Bell Steve, "Innovative Applications Stimulate Coiled Tubing Development," World Oil , 217(6): 61 (June 1996)
	C17	Sas-Jaworsky II and Mark Elliot Teel, "Coiled Tubing 1995 Update: Production Applications," World Oil, 216 (6): 97 (June 1995 )
	C18	Sas-Jaworsky, A. and J.G. Williams, "Advanced composites enhance coiled tubing capabilities," World Oil, pp. 57-69 (April 1994)
	C19	Sas-Jaworsky, A. and J.G. Williams, "Development of a composite coiled tubing for oilfield services," Society of Petroleum Engineers, SPE 26536, pp. 1-11 (1993)
	C20	Sas-Jaworsky, A. and J.G. Williams, "Enabling capabilities and potential applications of composite coiled tubing," Proceedings of World Oil's 2 <sup>nd</sup> International Conference on Coiled Tubing Technology, pp. 2-9 (1994)
	C21	Sas-Jaworsky II Alex, "Developments Position CT for Future Prominence," The American Oil & Gas Reporter, pp. 87-92 (March 1996)
	C22	Tore Wood Moe et al., "Spoolable, Composite Piping for Chemical and Water Injection and Hydraulic Valve Operation," Proceedings of the 11 <sup>th</sup> International Conference on Offshore Mechanics and Arctic Engineering-1992-, Volume III, Part A- Materials Engineering, pp. 199-207 (1992)
	C23	Shuart J. M. et al., "Compression Behavior of $\pm 45^\circ$ -Dominated Laminates with a Circular Hole or Impact Damage," AIAA Journal 24(1): 115- 122 (January 1986)
	C24	Silverman A. Seth, "Spoolable Composite Pipe for Offshore Applications," Materials Selection & Design, pp. 48-50 (January 1997)
	C25	Rispler K. et al., "Composite Coiled Tubing in Harsh Completion/Workover Environments," Paper presented at the SPE GAS Technology Symposium and Exhibition held in Calgary, Alberta, Canada, on March 15-18, 1998, pp. 405-410
	C26	Williams G. J. et al., "Composite Spoolable Pipe Development, Advancements, and Limitations," Paper presented at the 2000 Offshore Technology Conference held in Houston Texas from 1 <sup>st</sup> to 4 <sup>th</sup> of May 2000, pp. 1-16
EXAMINER		DATE CONSIDERED
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.		